

Y22-744-SS

DESIGN AND INSTALL FLOATING PHOTOVOLTAIC SYSTEM FOR SOUTHERN REGIONAL WATER SUPPLY FACILITY

Orange County, Florida is interested in purchasing the **design and installation of a floating photovoltaic (PV) system for the southern regional water supply facility** specifically designed to float on water on reservoirs and ponds that the County owns and operates. To date, research within the industry has indicated to the County that D3Energy, the exclusive developer and distributor of Ciel & Terre's **Hydrelio**® system, is the only application that fulfills the requirements below. Minimum Specifications features and capabilities are listed below:

1) Technical Characteristics

- a) The floating PV system has been designed to guarantee the load resistance for following conditions (determined through wind tunnel tests and calculations):
 - i) Water velocity: no more than 2.3 mph.
 - ii) Waves: up to 3.3 ft.
 - iii) Temperature: between -4 °F and 122 °F
 - iv) Snow load: limited to 50lbs PSF
 - v) Wind velocity: minimum wind rating of 130mph with capabilities of wind ratings above 150mph
- b) Minimum expected lifespan of 25 years
- c) Floating PV system and all components (including the anchoring system) to have a minimum warranty of 10 years
- d) Ability to demonstrate a currently installed floating PV system that has experience in and can withstand hurricane conditions
- e) Floating PV system to have been specifically designed for and appropriate over water, and in accordance with all Florida electric codes
- f) Floats are manufactured in HDPE (high-density polyethylene) through a process of blow molding extrusion

2) Test and Certifications

- a) Wind tunnel tests carried out and validated by a third party.
- b) Wave resistance test (calculation & mechanical traction resistance tests) carried out and validated by a third party.
- c) Current resistance tests witnessed by an independent audit and inspection company.
- d) Anchoring resistance and impact on structure evaluated by endurance tests on connection tabs carried out by a third party.

3) Minimum Qualifications

- a) Qualifications
 - i) Floating PV system to have been successfully implemented for multiple floating PV installations of at least 1.0 megawatt in the last 5 years

- ii) Provide documentation demonstrating a minimum of two (2) examples of successful design & installation of floating solar photovoltaic systems with at least one (1) installation within the State of Florida.
- b) General Experience
 - i) At least five (5) years of general experience in performing the services described above.
- c) Specific Experience
 - i) Contractor with at least two (5) years of specific experience in successfully designing & installing a floating solar photovoltaic system.
 - ii) Bidder must provide proof of licenses that demonstrate Florida State License credential of Master Electrician, Electrical Contractor, or Certified Solar Contractor.

Any vendor meeting the County's requirements is invited to contact **Todd Jackson** and provide information on their product/service specifications by email at Todd.Jackson@ocfl.net no later than by 5:00 PM (local time), **Saturday, October 30, 2021**.